

APPENDIX

1. A method of optimizing multi-enterprise supply chain agreements using an electronic option contract, the method comprising:

determining at a buyer computer a range of forecasted demand for a product;
communicating from the buyer computer to a seller computer an offer to enter into an option contract for the supply of a product, the option contract including an option corresponding to the range of forecasted demand;
executing the option contract;
updating at the buyer computer the forecasted demand; and
exercising the option in the option contract within the range of forecasted demand based on the updated forecasted demand.

2. The method of Claim 1, wherein the option comprises a range of parameters selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;
a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and
a minimum number and a maximum number of locations where a product must be delivered.

3. The method of Claim 1, wherein the option comprises a plurality of ranges of parameters each selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;
a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and
a minimum number and a maximum number of locations where a product must be delivered.

4. The method of Claim 1, wherein the option contract includes an exercise period comprising a period of time after the execution of the option contract during which the buyer must exercise its option.

5. The method of Claim 4, wherein exercising the option comprises:
specifying a first quantity of product desired at a first time during the exercise period;
specifying a second quantity of product desired at a second time during the exercise period;
and wherein the updated forecasted demand comprises the sum of the first and second quantities of product desired.

6. The method of Claim 1, further comprising:
receiving from the seller computer a modified range of forecasted demand comprising the range of forecasted demand modified by an optimization model at the seller computer;
and
accepting the modified range of forecasted demand as a term to the option contract.

7. The method of Claim 1, further comprising:
receiving a proposed contract term from the seller computer;
accessing a memory comprising a range of acceptable contract terms; and
comparing the proposed contract term to the range of acceptable contract terms.

8. The method of Claim 7, further comprising:
determining that the proposed contract term is within the range of acceptable contract terms; and
accepting the proposed contract term without user input.

9. The method of Claim 7, further comprising:
determining that the proposed contract term is not within the range of acceptable contract terms; and
identifying the proposed contract term as a term requiring user input prior to acceptance.

10. The method of Claim 1, further comprising:
determining at the buyer computer a proposed option price comprising a value of the option to a buyer associated with the buyer computer;
communicating from the buyer computer to the seller computer the proposed option price; and
negotiating with the seller computer an agreed option price based on the value of the option to the buyer and a cost of the option to a seller associated with the seller's computer.

11. The method of Claim 10, wherein negotiating an agreed option price comprises:
receiving from the seller computer a modified proposed range of forecasted demand comprising the proposed range of forecasted demand modified by an optimization model at the seller computer;
determining a modified proposed option price based on the modified proposed range of forecasted demand; and
communicating the modified proposed option price to the seller computer.

12. A method of optimizing multi-enterprise supply chain agreements using an electronic option contract, the method comprising:

receiving at a seller computer terms of an option contract from a buyer computer, the terms comprising an option corresponding to a buyer's range of forecasted demand for a product;

communicating to the buyer computer an acceptance of the terms of the option contract;

storing the terms of the accepted option contract in a memory accessible to the seller computer;

receiving from the buyer computer a request to exercise the option with the buyer's updated forecasted demand for the product; and

enforcing the terms of the option contract at the seller computer without user input.

13. The method of Claim 12, wherein the option comprises a range of parameters selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

a minimum number and a maximum number of locations where a product must be delivered.

14. The method of Claim 12, wherein the option comprises a plurality of ranges of parameters each selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

a minimum number and a maximum number of locations where a product must be delivered.

15. The method of Claim 12, wherein the option contract includes an exercise period comprising a period of time after the execution of the option contract during which the buyer must exercise its option, and wherein enforcing the terms of the option contract comprises:

receiving a request from the buyer computer to exercise the buyer's option comprising an identification of the buyer's exercised level of demand under the contract;

accessing the memory to retrieve the stored contract terms, including an exercise period begin date and an exercise period end date; and

comparing a current date to the exercise period begin date and the exercise period end date.

16. The method of Claim 15, further comprising:

determining that the exercise period has begun and has not expired; and

accepting the buyer computer's request to exercise the buyer's option.

17. The method of Claim 16, wherein the buyer computer's request comprises an identification of a first quantity of product desired, and further comprising:

storing the request for a first quantity of product desired in the memory;

receiving a subsequent request from the buyer computer to exercise the buyer's option comprising an identification of a second quantity of product desired;

determining that the exercise period has not yet expired; and

storing the request for a second quantity of product desired in the memory.

18. The method of claim 16, further comprising:

comparing the buyer's exercised demand level to a minimum obligation of the buyer under the contract; and

determining a penalty if the buyer's minimum obligation level exceeds the buyer's exercised demand level after the expiration of the exercise period.

19. A procurement manager operable to be executed on the processor of a buyer computer, the procurement manager comprising:

- a forecast module operable to determine the buyer's range of forecasted demand for a product;

- a negotiation module operable to communicate to a seller computer an offer to enter into an option contract for the supply of a product, the option contract including a proposed option corresponding to the range of forecasted demand, the negotiation module further operable to receive from the seller computer a modified range of forecasted demand, to communicate the modified range of forecasted demand to the forecast module, and to receive from the forecast module a compromised range of forecasted demand;

- an execution module operable to execute an option contract including an option corresponding to the compromised range of forecasted demand; and

- an exercise module operable to receive from the forecast module an updated forecasted demand within the compromised range of forecasted demand and to communicate to the seller computer a request to exercise the option with the updated forecasted demand.

20. The procurement manager of Claim 19, wherein the option comprises a range of parameters selected from a group consisting of:

- a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

- a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

- a minimum number and a maximum number of locations where a product must be delivered.

21. The procurement manager of Claim 19, wherein the option comprises a plurality of ranges of parameters each selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

a minimum number and a maximum number of locations where a product must be delivered.

22. The procurement manager of Claim 19, wherein the option contract includes an exercise period comprising a period of time after the execution of the option contract during which the buyer must exercise its option, and wherein the exercise module is further operable to specify a first quantity of product desired at a first time during the exercise period and to specify a second quantity of product desired at a second time during the exercise period, the buyer's obligation under the option contract comprising the sum of the first and second quantities of product desired.

23. The procurement manager of Claim 19, wherein the negotiating module is further operable to receive a proposed contract term from the seller computer, access a memory comprising a range of acceptable contract terms, determine that the proposed contract term is within the range of acceptable contract terms, and to accept the proposed contract term without user input.

24. The procurement manager of Claim 19, wherein the negotiating module is further operable to receive a proposed contract term from the seller computer, access a memory comprising a range of acceptable contract terms, determine that the proposed contract term is not within the range of acceptable contract terms, and to identify the proposed contract term as a term requiring user input prior to acceptance.

25. The procurement manager of Claim 19, further comprising an aggregation module operable to compare a buyer's aggregation of parameters with a seller's aggregation of parameters, and to transform at least one of the aggregations of parameters to conform with a common aggregation of parameters.

26. The procurement manager of Claim 19, further comprising an option price module operable to determine a proposed option price comprising a value of the option to a buyer associated with the procurement manger and to communicate the proposed option price to a seller computer, and wherein the negotiation module is operable to negotiate with the seller computer an agreed option price based on the value of the option to the buyer and a cost of the option to a seller associated with the seller's computer.

27. The procurement manger of Claim 19, further comprising a tracking module operable to store terms of the executed option contract and to track the buyer's fulfillment of its obligations under the option contract.

28. A supply manager operable to be executed on the processor of a seller computer, the supply manager comprising:

a forecast module operable to determine the seller's range of forecasted supply capacity for a product;

a negotiation module operable to receive from a buyer computer an offer to enter into an option contract for the supply of a product, the option contract including a proposed option corresponding to a range of forecasted demand;

an execution module operable to execute the option contract and to store the terms of the option contract in a memory accessible to the seller computer; and

a tracking module operable to receive a request from the buyer computer to exercise the option, to access the memory to determine the terms of the option contract, and to determine whether to grant the request to exercise the option.

29. The supply manager of Claim 28, wherein the option comprises a range of parameters selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

a minimum number and a maximum number of locations where a product must be delivered.

30. The supply manager of Claim 28, wherein the option comprises a plurality of ranges of parameters each selected from a group consisting of:

a minimum quantity of a product that the buyer is obligated to purchase, and a maximum quantity of the product that the seller is obligated to supply;

a minimum number of product types that the buyer is obligated to purchase, and a maximum number of product types that the seller is obligated to supply; and

a minimum number and a maximum number of locations where a product must be delivered.

31. The supply manager of Claim 28, wherein the option contract includes an exercise period during which the buyer must exercise its option, and wherein the option contract comprises a maximum supply quantity that the seller has agreed to supply, and wherein the request to exercise the option comprises a first request for a first quantity of product desired, and wherein the tracking module is operable to store the request in the memory if a current date is within the exercise period and the first quantity is less than or equal to the maximum supply quantity.

32. The supply manager of Claim 31, wherein the request to exercise the option comprises a second request for a second quantity of product desired, and wherein the tracking module is operable to store the request in the memory if a current date is within the exercise period and the sum of the first and second quantities is less than or equal to the maximum supply quantity.

33. The supply manager of Claim 28, wherein the option contract comprises a penalty term specifying a penalty for a violation of the contract terms, and wherein the tracking module is operable to identify a violation of the contract terms and to assess a penalty for the violation based on the penalty term.

34. The supply manager of Claim 28, wherein the offer to enter into the option contract comprises a proposed term, and wherein the negotiation module is operable to access a memory comprising a range of acceptable contract terms, determine that the proposed contract term is within the range of acceptable contract terms, and to accept the proposed contract term without user input.

35. The supply manager of Claim 28, wherein the offer to enter into the option contract comprises a proposed term, and wherein the negotiation module is operable to access a memory comprising a range of acceptable contract terms, determine that the proposed contract term is not within the range of acceptable contract terms, and to identify the proposed contract term as a term requiring user input prior to acceptance.

36. The supply manager of Claim 28, further comprising an aggregation module operable to compare a buyer's aggregation of parameters with a seller's aggregation of parameters, and to transform at least one of the aggregations of parameters to conform with a common aggregation of parameters.

37. The supply manager of Claim 28, further comprising an option price module operable to determine a proposed option price comprising a cost of the proposed option to a seller associated with the supply manger and to communicate the proposed option price to the buyer computer, and wherein the negotiation module is operable to negotiate with the seller computer an agreed option price based on the value of the option to the buyer and a cost of the option to a seller associated with the seller's computer.